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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,688	08/07/2001	Bily Wang	Harvatek-9030	8720

7590 10/02/2002
Hung Chang Lin
8 Schindler Court
Silver Spring, MD 20903

EXAMINER

FARAHANI, DANA

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 10/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,688

Applicant(s)

WANG ET AL.

Examiner

Dana Farahani

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. In response to the Appeal Brief filed on September 3, 2002, the rejections in the Final Office Action dated May 23, 2002 are withdrawn, and new grounds of rejections are presented in this office action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made

3. Claims 2-4, 6, 9-11, 15, 16, and 18-19 are rejected under 35 U.S.C. 102(e) as being unpatentable over Sasano (U.S. Patent 6,313,525), previously cited.

Regarding claims 2-4 and 19, Sasano discloses in figure 4 a method for fabricating a focusing cup for an optoelectronic device package comprising the steps of forming a through hole in an upper insulating substrate layer b; stacking the upper insulating substrate over a lower insulating substrate a; and mounting an optoelectronic device f on the lower substrate inside the through hole.

Sasano does not disclose, in figure 4, the hole is of conical shape.

Sasano discloses in figure 1, image device 7 is in a conical shaped hole in substrate 1. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the hole of figure 4 conical shape in order to

Art Unit: 2814

conveniently mount the wires of the image device on a step shaped wall of the cone, as shown in figure 1.

Regarding claims 6 and 18, the optoelectronic device of figure 1 has two top electrodes (not shown in the figure) wire-bonded by wiring 8 respectively to two bonding pads, which are on the part numbered 4, mounted on top of the upper substrate.

Regarding claims 9-11, 15 and 16, the wall of the through hole is covered with metal coating 6 to enhance light reflection.

4. Claims 7, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasano as applied to claim 1 above, and further in view of Komoto et al., hereinafter Komoto (U.S. 6,340,824), previously cited.

Regarding claims 7, 14, and 17, Sasano discloses most of the limitations of the claimed invention, as above discussed.

Sasano does not disclose a metallic plate between the optoelectronic device and the lower substrate to enhance light reflection.

Komoto discloses in figure 122 a total metal reflector RE3 made in a light-emitting hole in order to limit the path for releasing light (see column 56, lines 15-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a metal plate, or plurality of metal plates, between device 7 of figure 1 in Sasano's invention in order to limit the path of releasing light.

5. Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasano as applied to claim 8 above, and further in view of Kamizato et al., hereinafter Kamizato, previously cited (U.S. 5,642,373).

Art Unit: 2814

Sasano discloses the limitation in claims 1 and 8. Sasano does not disclose the lead ends are folded.

Kamizato discloses in column 5, lines 56-67, that folding the light generated region gives more power optical output. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to fold the electrodes in order to receive more power output.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (703)305-1914. The examiner can normally be reached on M-F 9:00AM - 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (703)306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Dana Farahani
September 26, 2002


Olik Chaudhuri
Supervising Patent Examiner
Technology Center 2000